
Transfer of Four Peruvian *Altamiranoa* Species to *Sedum* (Crassulaceae)

Joachim Thiede

Botanical Institute, University of Cologne, Gyrhofstraße 15, D-50931 Cologne, Germany.
jthiede@novell.biolan.uni-koeln.de

Henk 't Hart

Department of Plant Ecology and Evolutionary Biology, Utrecht University, Padualaan 8, NL-3584 CH Utrecht, The Netherlands. HtHart@bio.uu.nl

ABSTRACT. Recently *Altamiranoa* Rose (\equiv *Villadia* sect. *Altamiranoa* (Rose) R. T. Clausen) was merged with *Sedum* L. For four Peruvian *Altamiranoa* species without valid names in *Sedum* we propose three new combinations: *Sedum decipiens* (Baker) Thiede & 't Hart, *Sedum reniforme* (H. Jacobsen) Thiede & 't Hart, and *Sedum weberbaueri* (Diels) Thiede & 't Hart, and one new name, *Sedum plicatum* Thiede & 't Hart. A lectotype is designated for *Cotyledon decipiens* Baker, the basionym of *Sedum decipiens*.

Rose (in Britton & Rose, 1903: 3) described the genera *Altamiranoa* Rose and *Villadia* Rose to accommodate some Mexican Crassulaceae with sympetalous flowers. Previously these species had mostly been classified in *Cotyledon* L., the hold-all of sympetalous Crassulaceae. Berger (1930) included both genera in subfamily Echeverioideae A. Berger, but noted that several *Altamiranoa* species are very similar to *Sedum*. Berger (1930) considered *Altamiranoa* and *Villadia* to be closely related though they differ in the structure of the inflorescences. *Altamiranoa* has predominantly cymose inflorescences, whereas those of *Villadia* are usually spicate, racemose, or, most frequently, thyrsoïd. Fröderström (1936) more or less accepted Rose's concept, but transferred several *Altamiranoa* species to *Sedum*. Baehni and Macbride (in Baehni, 1937), on the other hand, united *Altamiranoa* and *Villadia*, and Clausen (1940) distinguished *Altamiranoa* as a section of *Villadia*. Baehni's and Clausen's classifications have been widely accepted until recently, when Moran (1996) merged *Villadia* sect. *Altamiranoa* (Rose) R. T. Clausen (\equiv *Altamiranoa*) with *Sedum*. In particular the occurrence of intermediate forms bridging the gap between *Altamiranoa* and *Sedum*, and his doubts about the monophyly of *Villadia* in the sense of Baehni and Macbride and Clausen, prompted Moran's decision. Moran (1996) already made the necessary new combinations under *Sedum* for three

Mexican *Villadia* (sensu lato) species. Here we complete the transfer of *Altamiranoa* to *Sedum* with three new combinations and one new name for four Peruvian species.

Sedum decipiens (Baker) Thiede & 't Hart, comb. nov. Basionym: *Cotyledon decipiens* Baker, Refug. Bot. 3, t. 200. 1870. *Echeveria decipiens* (Baker) E. Morren, Belgique Hort. 24: 159. 1874. *Altamiranoa decipiens* (Baker) Fröderström, Acta Horti Gothob. 10, App.: 145. 1936. *Villadia decipiens* (Baker) H. Jacobsen, Natl. Cact. Succ. J. 13: 76. 1958. TYPE: Peru. Sine loco, sine datum, *Farris s.n.* (holotype, not extant); Refug. Bot. 3, tab. 200. 1870 (lectotype, designated here).

The species is known only from the type collection and is as yet not validated by additional collections (Brunner, 1993: 376). No type material is extant at Kew (where J. G. Baker worked), at the British Museum (Baker described many species from specimens deposited at BM), or at Oxford (according to a note in the protologue Baker apparently obtained living specimens of Farris's collection via W. W. Saunders, whose herbarium is now kept at OXF). Therefore, we designate the excellent figure (tab. 200) accompanying the diagnosis as the lectotype of *Cotyledon decipiens* Baker.

Sedum plicatum Thiede & 't Hart, nom. nov. Replaced name: *Cotyledon stricta* Diels, Bot. Jahrb. Syst. 37: 410. 1906. *Altamiranoa stricta* (Diels) A. Berger, in Engler & Prantl, Nat. Pflanzenfam. ed. 2, 18a: 470. 1930. *Villadia dielsii* Baehni & J. F. Macbride, Candollea 7: 285. 1937 (nom. nov. pro *Cotyledon stricta* Diels due to *Villadia stricta* Rose, 1905). TYPE: Peru. Dep. Ancachs (Ancachs): pr. Caraz in rupestribus camporum, 2200–2500 m s.m., flor. m. Maj. 1903, *Weberbauer 3000* (holotype, B).

When *Cotyledon stricta* is transferred to *Sedum* neither the name *Sedum strictum* nor *Sedum dielsii* can be used, because of the earlier homonyms *Sedum strictum* K. Koch (1847) and *Sedum dielsii* Hamet (1913). The new name refers to the costately plicate petals mentioned by Diels in the original description of *Cotyledon stricta*.

Sedum reniforme (H. Jacobsen) Thiede & 't Hart, comb. nov. Basionym: *Villadia reniformis* H. Jacobsen, Natl. Cact. Succ. J. 13: 76. 1958 (nom. nov. pro *Cotyledon imbricata* Diels due to *Villadia imbricata* Rose, 1903). *Cotyledon imbricata* Diels, Bot. Jahrb. Syst. 37: 411. 1906. *Altamiranoa imbricata* (Diels) A. Berger, in Engler & Prantl, Nat. Pflanzenfam. ed. 2, 18a: 470. 1930. *Villadia imbricata* (Diels) Baehni & J. F. Macbride, Candollea 7: 286. 1937. Nom. illeg. (Art. 53.1 Tokyo Code, non *Villadia imbricata* Rose, Bull. New York Bot. Gard. 3: 3. 1903). TYPE: Peru. Dep. Cajamarca: pr. Hualgayoc, juxta praedim La Tahona in rupibus 2600 m s.m., flor. m. Maj. 1904, *Weberbauer* 4053 (holotype, B).

When *Cotyledon imbricata* is transferred to *Sedum* the epithet of the second oldest name of this taxon, the synonym *Villadia reniformis* H. Jacobsen, must be used because of the earlier homonym *Sedum imbricatum* (Edgeworth) Walpers (1848–1849).

Sedum weberbaueri (Diels) Thiede & 't Hart, comb. nov. Basionym: *Cotyledon weberbaueri* Diels, Bot. Jahrb. Syst. 37: 411. 1906. *Altamiranoa weberbaueri* (Diels) A. Berger, in Engler & Prantl, Nat. Pflanzenfam. ed. 2, 18a:

470. 1930. *Villadia weberbaueri* (Diels) Baehni & J. F. Macbride, Candollea 7: 286. 1937. TYPE: Peru. Dep. Amazonas: Prov. Chachapoyas ad altera orientalia vallis fluminis Marañon supra Balsas in graminosis siccis 2300 m s.m., flor. m., Jun. 1904, *Weberbauer* 4282 (holotype, B).

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